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**UNITED STATES DEPARTMENT OF COMMERCE
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/529,873 07/27/00 HOLMES

A C1043/7023

IM22/1106
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| EXAMINER |
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| TRUONG, D | |
| ART UNIT | PAPER NUMBER |

1711

DATE MAILED:

11/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/529,873

Applicant(s)

Holmes et al.

Examiner

Duc Truong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 9, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 30, and 31 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24, 30, and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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The restriction in the last Office action is hereby withdrawn in view of Applicant's arguments.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0745658 or WEI et al. or ANTONIADIS et al or WAN et al. or HSIEH et al, all of record on 1449.

EP 0745658 discloses a light emitting polymer based on poly(p-phenylene vinylene) of the formulae (see Table 1, formulae 5 and 6) in that two substituted groups can form a crown ether or alkoxy group).

WEI discloses a conjugated polymer based on poly(p-phenylene vinylene) to form poly(3,4-diphenyl-2,5-thienylene vinylene) (see Scheme 2).

ANTONIADIS discloses the chloride polymer of DP-PPV was prepared from the polymerization of 1,4-bis(chloromethyl)-2,3-diphenyl benzene (see Figure 1 in that two substituted groups are two phenyl group).

WAN discloses thin films of DP-PPV prepared via a chlorine route involving the polymerization of 1,4-bis(chloromethyl)-2,3-diphenyl benzene (see Abstract).

In Table 1, the reference discloses the degree of conversion of DP-PPV under different thermal conditions in that two substituted group are two phenyl groups.

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HSIEH discloses a halogen route using 1,4-bis(chloromethyl)-2,3-diphenyl benzene with specific steps of the process to form DP-PPV having the electroluminescent characteristic.

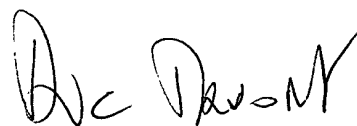
The disclosure of the references differ from the instant claims in that they do not disclose the broad teachings of the claimed formulae causing the blue-shift in the photoluminescence and/or electroluminescence of the compounds..

However, the references do disclose specific formula which are included in the broad teaching of the claimed formulae. Then it would have been obvious to one of ordinary skill in the art to select the products from the references within the limitations of the instant claims having the claimed formulae since they have been shown to be effective in a similar system and thus would have been expected to provide adequate results. There is no showing of unexpected results derived from said selections.

Any inquiry concerning this communication should be directed to Duc Truong at telephone number (703) 308-2437.

Duc Truong

November 2, 2001



DUCTRONG
PRIMARY EXAMINER